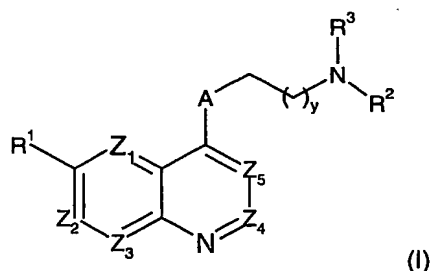


What is claimed is:

1. A compound according to formula (I)



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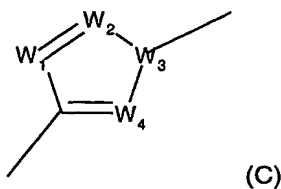
one of Z<sub>1</sub>, Z<sub>2</sub>, Z<sub>3</sub>, Z<sub>4</sub> and Z<sub>5</sub> is N, one is CR<sup>1a</sup> and the remainder are CH, or one or two of Z<sub>1</sub>, Z<sub>2</sub>, Z<sub>3</sub>, Z<sub>4</sub> and Z<sub>5</sub> are independently CR<sup>1a</sup> and the remainder are CH;

- 10 R<sup>1</sup> and R<sup>1a</sup> are independently hydrogen; hydroxy; (C<sub>1-6</sub>)alkoxy unsubstituted or substituted by (C<sub>1-6</sub>)alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two (C<sub>1-6</sub>)alkyl, acyl or (C<sub>1-6</sub>)alkylsulphonyl groups, CONH<sub>2</sub>, hydroxy, (C<sub>1-6</sub>)alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C<sub>1-6</sub>)alkylsulphonyloxy; (C<sub>1-6</sub>)alkoxy-substituted(C<sub>1-6</sub>)alkyl; halogen; (C<sub>1-6</sub>)alkyl; (C<sub>1-6</sub>)alkylthio; trifluoromethyl; trifluoromethoxy; nitro;
- 15 cyano; azido; acyl; acyloxy; acylthio; (C<sub>1-6</sub>)alkylsulphonyl; (C<sub>1-6</sub>)alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two (C<sub>1-6</sub>)alkyl, acyl or (C<sub>1-6</sub>)alkylsulphonyl groups;

20

provided that when Z<sub>1</sub>, Z<sub>2</sub>, Z<sub>3</sub>, Z<sub>4</sub> and Z<sub>5</sub> are CR<sup>1a</sup> or CH, then R<sup>1</sup> is not hydrogen;

- 25 A is a substituted or unsubstituted 5 membered aromatic heterocyclic ring of formula (C):



wherein:

$W_1$  and  $W_2$  are each independently selected from N, O, S, and CR<sup>8</sup>;

$W_3$  is N or C;

5  $W_4$  is N, O, S, or CR<sup>8</sup>;

each R<sup>8</sup> is independently selected from hydrogen; hydroxy; halogen; trifluoromethyl; trifluoromethoxy; cyano; nitro; azido; acyl; acyloxy; acylthio; amino, mono- and di-(C<sub>1-6</sub>)alkylamino; and substituted and unsubstituted (C<sub>1-6</sub>)alkoxy, 10 (C<sub>1-6</sub>)alkyl, (C<sub>3-7</sub>)cycloalkyl, aminocarbonyl, (C<sub>1-6</sub>)alkylthio, (C<sub>1-6</sub>)alkylsulphonyl, and (C<sub>1-6</sub>)alkylsulphoxide;

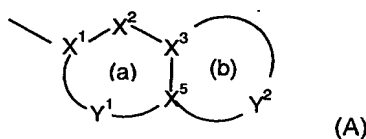
R<sup>2</sup> is hydrogen, or (C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl optionally substituted with 1 to 3 groups selected from:

15 amino optionally substituted by one or two (C<sub>1-4</sub>)alkyl groups; carboxy; (C<sub>1-4</sub>)alkoxycarbonyl; (C<sub>1-4</sub>)alkylcarbonyl; (C<sub>2-4</sub>)alkenyloxycarbonyl; (C<sub>2-4</sub>)alkenylcarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C<sub>1-4</sub>)alkyl, hydroxy(C<sub>1-4</sub>)alkyl, aminocarbonyl (C<sub>1-4</sub>)alkyl, (C<sub>2-4</sub>)alkenyl, (C<sub>1-4</sub>)alkylsulphonyl, trifluoromethylsulphonyl, 20 (C<sub>2-4</sub>)alkenylsulphonyl, (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl or (C<sub>2-4</sub>)alkenylcarbonyl; cyano; tetrazolyl; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 5-oxo-1,2,4-oxadiazol-3-yl; halogen; (C<sub>1-4</sub>)alkylthio; trifluoromethyl; hydroxy optionally substituted by (C<sub>1-4</sub>)alkyl, (C<sub>2-4</sub>)alkenyl, 25 (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl, (C<sub>2-4</sub>)alkenylcarbonyl; oxo; (C<sub>1-4</sub>)alkylsulphonyl; (C<sub>2-4</sub>)alkenylsulphonyl; or (C<sub>1-4</sub>)aminosulphonyl wherein the amino group is optionally substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl;

30 R<sup>3</sup> is a group -U-R<sup>4</sup> where

U is selected from CH<sub>2</sub>, C=O, and SO<sub>2</sub> and

R<sup>4</sup> is a substituted or unsubstituted bicyclic carbocyclic or heterocyclic ring system (A):



containing up to four heteroatoms in each ring in which

ring (a) is aromatic and ring (b) is aromatic or non-aromatic;

X<sup>1</sup> is C;

5 X<sup>2</sup> is N or CR<sup>5</sup>;

X<sup>3</sup> and X<sup>5</sup> are C;

Y<sup>1</sup> is a 1 to 2 atom linker group, each atom of which is independently selected from N and CR<sup>5</sup>;

10 Y<sup>2</sup> is a 2 to 6 atom linker group, each atom of Y<sup>2</sup> being independently selected from N, NR<sup>7</sup>, O, S(O)<sub>x</sub>, CO, CR<sup>5</sup> and CR<sup>5</sup>R<sup>6</sup>;

each of R<sup>5</sup> and R<sup>6</sup> is independently selected from: hydrogen; (C<sub>1-4</sub>)alkylthio; halo; carboxy(C<sub>1-4</sub>)alkyl; halo(C<sub>1-4</sub>)alkoxy; halo(C<sub>1-4</sub>)alkyl; (C<sub>1-4</sub>)alkyl; (C<sub>2-4</sub>)alkenyl; (C<sub>1-4</sub>)alkoxycarbonyl; formyl; (C<sub>1-4</sub>)alkylcarbonyl;

15 (C<sub>2-4</sub>)alkenyloxycarbonyl; (C<sub>2-4</sub>)alkenylcarbonyl; (C<sub>1-4</sub>)alkylcarbonyloxy; (C<sub>1-4</sub>)alkoxycarbonyl(C<sub>1-4</sub>)alkyl; hydroxy; hydroxy(C<sub>1-4</sub>)alkyl; mercapto C<sub>1-4</sub>)alkyl; (C<sub>1-4</sub>)alkoxy; nitro; cyano; carboxy; amino or wherein the amino group is optionally substituted by (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl, (C<sub>2-4</sub>)alkenylcarbonyl, (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl and optionally further substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; or (C<sub>2-6</sub>)alkenyl; (C<sub>1-4</sub>)alkylsulphonyl; (C<sub>2-4</sub>)alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally mono- or di-substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; aryl; aryl(C<sub>1-4</sub>)alkyl; or aryl(C<sub>1-4</sub>)alkoxy;

25 each R<sup>7</sup> is independently hydrogen; trifluoromethyl; (C<sub>1-4</sub>)alkyl unsubstituted or substituted by hydroxy, (C<sub>1-6</sub>)alkoxy, (C<sub>1-6</sub>)alkylthio, halo or trifluoromethyl; (C<sub>2-4</sub>)alkenyl; aryl; aryl (C<sub>1-4</sub>)alkyl; arylcarbonyl; heteroarylcarbonyl; (C<sub>1-4</sub>)alkoxycarbonyl; (C<sub>1-4</sub>)alkylcarbonyl; formyl; (C<sub>1-6</sub>)alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by

30 (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl, (C<sub>2-4</sub>)alkenylcarbonyl, (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl and optionally further substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; and

x is 0, 1, or 2;

y is 1, or 2; or a pharmaceutically acceptable salt thereof.

- 5     2.     A compound according to claim 1 wherein Z<sub>5</sub> is CH or N, Z<sub>3</sub> is CH or CF and Z<sub>1</sub>, Z<sub>2</sub> and Z<sub>4</sub> are each CH, or Z<sub>1</sub> is N, Z<sub>3</sub> is CH or CF and Z<sub>2</sub>, Z<sub>4</sub> and Z<sub>5</sub> are each CH.
- 10     3.     A compound according to claim 1 wherein R<sup>1</sup> is methoxy and R<sup>1a</sup> is H or when Z<sub>3</sub> is CR<sup>1a</sup> it may be C-F.
4.     A compound according to claim 1 wherein heterocyclic ring (C) is substituted or unsubstituted pyrrole, thiophene, furan, thiazole or triazole.
- 15     5.     A compound according to claim 1 wherein R<sup>2</sup> is hydrogen or unsubstituted or substituted (C<sub>1-6</sub>)alkyl.
6.     A compound according to claim 1 wherein in the heterocyclic ring (A) Y<sup>2</sup> has 3-5 atoms including NR<sup>7</sup>, O or S bonded to X<sup>5</sup> and NHCO bonded via N to X<sup>3</sup>, or  
20     O or NH bonded to X<sup>3</sup>.
7.     A compound according to claim 1 wherein R<sup>4</sup> is selected from:  
4*H*-benzo[1,4]thiazin-3-one-6-yl,  
4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one-6-yl,  
25     4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one-6-yl,  
1,2,3,4-tetrahydro-[1,8]naphthyridine-7-yl,  
1*H*-pyrido[3,2-*b*][1,4]thiazin-2-one-7-yl,  
4*H*-benzo[1,4]oxazin-3-one-6-yl, and  
6-fluoro-2,3-dihydrobenzo[1,4]dioxine-7-yl.
- 30     8.     A compound according to claim 1 which is 3-Oxo-3,4-dihydro-2*H*-benzo[1,4]thiazine-6-sulfonic acid {3-[4-(6-methoxy-[1,5]naphthyridin-4-yl)-[1,2,3]triazol-1-yl]-propyl}amide or 6-[(2-{4-[6-(methoxy)-1,5-naphthyridin-4-yl]-1,3-thiazol-2-yl}ethyl)amino)methyl]-2*H*-pyrido[3,2-*b*][1,4]thiazin-3(4*H*)-one  
35     dihydrochloride

or a pharmaceutically acceptable salt thereof.

9. A method of treatment of bacterial infections in mammals which comprises  
the administration to a mammal in need thereof an effective amount of a compound  
5 according to claim 1.

10. A pharmaceutical composition comprising a compound according to claim 1  
and a pharmaceutically acceptable carrier for use in the treatment of bacterial  
infections in mammals.

10

11. A pharmaceutical composition comprising a compound according to claim 1,  
and a pharmaceutically acceptable carrier.